

ABSTRACT OF THE DISCLOSURE

A double acting synchronizer (18) includes cone clutch friction surfaces (24,40a and 26,42a) and jaw clutch teeth (28,38b and 30,38c) for frictionally synchronizing and positively connecting gears (14,16) to a shaft (12), and a plurality of integrated self-energizing/pre-energizing/blocker assemblies (44). The assemblies include pairs of self-energizing surfaces (54a,54b and 56a,56b) that respectively engage pairs of self-energizing surfaces (46a,46b and 48a,48b) to increase the engaging force of the cone clutches. The pairs of self-energizing surfaces are separated by non-self-energizing surfaces (54e,56e and 46c,48c) which engage to prevent unwanted engagement of the self-energizing surfaces when the synchronizer is in neutral. A detent mechanism resiliently positions the non-self-energizing surfaces for engagement when the synchronizer is in neutral.